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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,474	02/07/2001	G. Rodney Nelson	TAN-2-1495.01.US	4700

24374 7590 09/15/2011

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EXAMINER	
TSEGAYE, SABA	

ART UNIT	PAPER NUMBER
2467	

NOTIFICATION DATE	DELIVERY MODE
09/15/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

eoffice@volpe-koenig.com

Office Action Summary	Application No.	Applicant(s)	
	09/778,474	NELSON ET AL.	
	Examiner	Art Unit	
	SABA TSEGAYE	2467	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2011*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,7,15,30-32,34-36,38-41 and 43-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,7,15,30-32,34-36,38-41 and 43-62* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/06/11*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 07/06/11 has been entered.

2. Claims 1, 7, 15, 30-32, 34-36, 38-41 and 43-62 are pending. Currently no claims are in condition for allowance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 7, 30-32, 34-36, 38-41, 43-46, 48-51, 53-56, and 58-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Garcia-Belloido et al. (EP 1102512 A1) in view of Engstrom et al. (EP 0760564 A2).

Regarding claims 1, 30 and 34, Belloido discloses a method for supporting wireless communications, the method comprising:

assigning a plurality of PN codes to a field unit (…the component corresponding unambiguously with **the useful information** for transmitting to the fixed station is advantageously selected from a list (see Fig. 3) which is established with reference to the dynamic range of **the pilot signal**....0021; 0057-0059);

transmitting an indication of the plurality of PN codes to the field unit (0021);

receiving a first message in at least one time slot (...terminal chooses a arbitrarily both a time slot and code from a set of **time slots** and from a set of codes….0008), wherein the first message includes one of the plurality of PN codes (a set of codes, PN1-PN4), and the one of the plurality of PN codes is associated with a type of field unit request (…terminals for accessing the fixed station with a corresponding useful item of information selected form a list which is drown up while taking account of the dynamic range of the pilot signal…0046; the useful item of information transmitted to the fixed station corresponds to the power level used by the terminal….0041);

analyzing the one of the plurality of PN codes to determine a timing adjustment to be made at the field unit to synchronize the field unit with a base station (…**useful item** [PN1-PN4] of information transmitted to the fixed station corresponds to the power level used by terminal to make its own call request. This gives the fixed station **an indication uplink attenuation or path-loss**…0041). Further, Belloido discloses that the particular time slot and code and frequency combination selected at the terminal automatically gives the fixed station implicit knowledge concerning the distance-related measurement as performed by the terminal and makes the fixed station appropriate decision based on knowledge of the useful item of information (0035; 0046; 0061). In addition, Belloido discloses **that upper and lower limits** of

the distance-related measurement values must be know both to a network and a terminal and they should be broadcast periodically as part of the system information. The lower limit corresponds to a power received by the terminal is approximately equal to the power with which the pilot signal is broadcast by the fixed station. The upper limit corresponds to the power received by a terminal at the border of the cell…0046. Belloido does not expressly disclose a second message to the filed unit that includes the timing adjustment indicates an amount to advance timing and alternatively and amount to retard timing.

Engstrom teaches that a mobile station transmits a known signal sequence to a base station; the base station detects it and estimates a time delay and transmits timing advance information on an AGCH (page 3, lines 1-26).

It would have been obvious to one ordinary skill in the art at the time the invention was made to use advance timing, such as that suggested by Engstrom, in the system of Belloido in order to provide synchronization between the base station and mobile station.

Engstrom does not expressly disclose amount to retard timing. However, it would have been obvious to one ordinary skill in the art at the time the invention was made to use retard timing in the system of Belloido in order to provide synchronization between the base station and mobile station.

Regarding claim 7, Belloido discloses wherein the one of the plurality of PN codes comprises a plurality of symbols (0008; 0031; 0044).

Regarding claim 38, Belloido discloses a method for use in a field unit [12-14] operable in a wireless communication network, the method comprising:

receiving an indication of a plurality of PN codes from a base station [10, 11](each of the fixed stations broadcasts a pilot signal on a pilot channel (0003)....the component corresponding unambiguously with the useful information for transmitting to the fixed station is advantageously selected form a list (see Fig. 3) which is established with reference to the dynamic range of the **pilot signal**....0021; 0057-0059);

selecting a PN code form the plurality of PN codes received from the base station, wherein the selected PPN code is associated with a type of field unit request (...terminals for accessing the fixed station with a corresponding useful item of information selected form a list which is drown up while taking account of the dynamic range of the pilot signal...0046); and

transmitting the selected PN code to the base station (...the useful item of information transmitted to the fixed station corresponds to the power level used by the terminal....0041; 0053-0055). Further, Belloido discloses that the particular time slot and code and frequency combination selected at the terminal automatically gives the fixed station implicit knowledge concerning the distance-related measurement as performed by the terminal and makes the fixed station appropriate decision based on knowledge of the useful item of information (0035; 0046; 0061). In addition, Belloido discloses that upper and lower limits of the distance-related measurement values must be know both to a network and a terminal and they should be broadcast periodically as part of the system information. The lower limit corresponds to a power received by the terminal is approximately equal to the power with which the pilot signal is broadcast by the fixed station. The upper limit corresponds to the power received by a terminal at the border of the cell...0046. Belloido does not expressly disclose a second message to the filed

unit that includes the timing adjustment indicates an amount to advance timing and alternatively and amount to retard timing.

Engstrom teaches that a mobile station transmits a known signal sequence to a base station; the base station detects it and estimates a time delay and transmits timing advance information on an AGCH (page 3, lines 1-26).

It would have been obvious to one ordinary skill in the art at the time the invention was made to use advance timing, such as that suggested by Engstrom, in the system of Belloido in order to provide synchronization between the base station and mobile station.

Engstrom does not expressly disclose amount to retard timing. However, it would have been obvious to one ordinary skill in the art at the time the invention was made to use retard timing in the system of Belloido in order to provide synchronization between the base station and mobile station.

Regarding claims 31, 35, 40, Belloido discloses wherein a first channel (pilot channel) supports communication from the base station to the field unit and a second channel supports (RACH) communication from the field unit to the base station and wherein the first channel and the second channel comprise time slots (0017; 0034; 0030; 0053; 0059).

Regarding claims 32, 36 and 41, Belloido discloses wherein the receiver is configured to receive the message containing the PN code over a plurality of symbols (0054).

Regarding claim 39, Belloido discloses further comprising: adjusting transmission timing based on the timing adjustment (0003; 0037; 0050).

Regarding claims 43, 48, 53 and 58, Belloido discloses wherein the plurality of PN codes comprise a plurality of groups of one or more PN codes, and each of the plurality of groups of one or more PN codes is associated with a type of field unit request (0016-0018; 0033-0034).

Regarding claims 44, 49, 54 and 59, Belloido discloses wherein each of at least tow of the plurality of PN codes are respectively associated with a different type of field unit request (0016; 0018; 0035).

Regarding claims 45, 50, 55 and 60, Belloido discloses wherein the type of field unit request is a request to enter and active mode (0022; 0025; 0029).

Regarding claims 46, 51, 56 and 61, Belloido discloses wherein the type of field unit request is a request for bandwidth (0024).

5. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Belloido in view Engstrom of as applied to claim 1 above, and further in view of Jensen et al. (US 7,092,372 B1).

Belloido in view of Engstrom discloses all the claim limitations as stated above, except for the timing adjustment is a single bit.

Jensen teaches that the base station transmit a power adjustment bit (a single bit) that indicates whether to increase or decrease a transmission power at the user station (column 11, lines 42-60).

It would have been obvious to one ordinary skill in the art at the time the invention was made to use a single bit, such as that suggested by Jensen, in the system of Belloido in view of Engstrom in order to minimize interference in wireless systems.

6. Claims 47, 52, 57 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belloido in view of Engstrom as applied to claims 1, 30, 34 and 38 above, and further in view of Masui et al. (US 6,269,008).

Belloido in view of Engstrom discloses all the claim limitations as stated above, except for the type of field unit request is a request by the field unit to transmit data.

Masui teaches that a reservation channel, replay channel, and traffic channels are distinguished by PN codes which are applied to spread-spectrum (column 4, lines 45-49; lines 58-67).

It would have been obvious to one ordinary skill in the art at the time the invention was made to use type of field, such as that suggested by Masui, in the system of Belloido in view of Engstrom in order to provide non-collision of reservation packets to realize a high throughput (column 1, lines 65-67).

Response to Arguments

7. Applicant's arguments with respect to claims 1, 7, 15, 30-32, 34-36, 38-41 and 43-62 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SABA TSEGAYE whose telephone number is (571)272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan A. Phillips can be reached on (571) 272-3940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Saba Tsegaye
Examiner
Art Unit 2467

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Examiner, Art Unit 2467

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